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ABSTRACT

This collection of articles is a foundation-supported publication and will be of special interest to those planning health education curriculums and programs. They fall into three sections: a background article, a set of articles about actual programs, and a comprehensive collection of articles about planning the associate degree program in the junior college. The need for health assistants is stressed in all 10 articles which include: (1) Planning a Dental Auxiliary Program, (2) Issues for Teachers in Associate Degree Nursing Programs, and (3) Growth Pains for Associate Degree Nurse Educators. A related document is available as VT 011 515. (JS)

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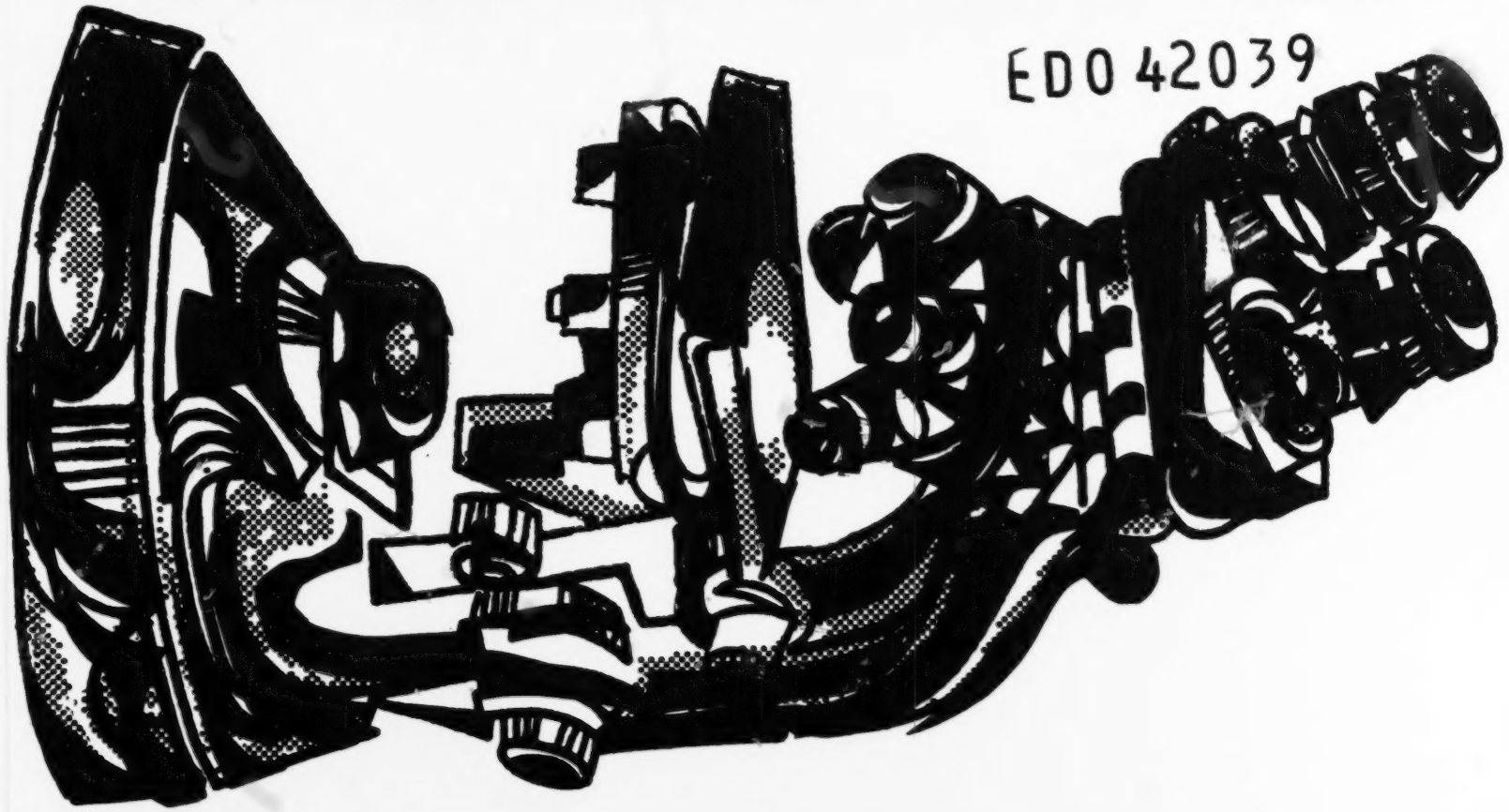

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VISION: Readings in Health and Medical Technology Education Programs

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Edited by Molly Frederick

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Occupational Education Project
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Miami Dade Junior College, Miami, Florida

Editor's Note:

This publication is the second in the *Vision* readings series – a series devoted to articles of general orientation in the allied medical and health technologies, and specific programs now in operation at junior colleges. Most of the articles in this publication have been reprinted from the *Junior College Journal* and appear together for the first time.

The articles fall logically into three sections: a background article, a set of articles about actual programs, and a comprehensive collection of articles about planning and using the associate degree nursing program in the junior college. As in all issues of the *Vision* series, the overwhelming need for health assistants in all medical fields is recognized, and it is hoped that this series will encourage new programs.–Molly M. Frederick

Variables in Planning Occupational Education Programs*

Four-letter words are common on campus in 1969, but there are other four-letter words which should guide the educational planner in establishing priorities for future occupational education programs. He must have a *goal*, know what *jobs* will be available, develop a *plan*, and spell out the *task* involved in implementing the plan. The Center for Priority Analysis at the National Planning Association has been conducting a study for the U.S. Office of Education relating national goals to planning priorities for vocational-technical education. We have noted a number of critical variables in educational planning which may stimulate the occupational education administrator to ask some pertinent questions about the priorities among his future programs.

First, what are the goals for occupational education? Goals, in this sense, are not abstract ideals or purposes but concrete outcomes you desire to obtain. When you buy a car, send your girl to camp, or save your money, you are allocating your resources according to your own personal objectives. Similarly, when we as a nation spend money for health, schools, or national defense, we are by those acts assigning some proportion of our society's resources to achieve national goals. The National Planning Association (N.P.A.) has been analyzing the costs of national goals for the 1970's in terms of how much it would cost for "more of the same" in contrast with what it would cost to assign a higher priority to objectives like education, urban development, or transportation.

Sixteen national goals represent a consensus of what we as a nation want to accomplish as originally itemized in 1960 by the Eisenhower Commission on National Goals. N.P.A. took these sixteen areas of concern – which included education, defense, social welfare, health, and urban development – and costed them out; in other words, estimated how much we, as citizens, would have to spend both in terms of individual consumption and government expenditures to achieve these goals.

The next step was to translate the dollar costs for these goals – calculated for the year 1975 – to jobs – the manpower required to achieve these objectives. The employment generated by expenditures related to the goals was defined in terms of eighty census occupations. Growth in employment was projected on an annual basis, and an average annual attrition due to death or retirement was included in an estimate of annual job openings.

In projecting these manpower requirements, we found, in the first place, that the four-hour day will not be upon us in the foreseeable future; that despite technological advances, we will not automate ourselves out of work in the next decade. Indeed, it appears that we cannot afford to achieve all sixteen objectives on which most of our citizens agree, and we will also face some severe manpower bottlenecks in specific occupations in our attempts to improve our way of life. Most of the jobs in the 1970's still will be performed by people with less than four years of college, but these jobs increasingly will emphasize educational credentials. The occupational patterns in employment in the economy of 1975 are not nearly as dependent on general growth measures – such as GNP and increases in man-hour productivity – as they are on the goals we choose to pursue. For instance, if we concentrate on social goals, such as welfare, education, and health, we will create many more jobs for professional and technical workers, teachers, social workers, doctors, and nurses, while shortages in some of these professions will also expand employment for trained paraprofessionals. However, if we put a relatively higher priority on developing our natural resources, improving our urban environment, and modernizing and expanding our transportation system, we will greatly expand the need for craftsmen and operatives – particularly in the construction trades – and blue-collar workers to operate and maintain our transportation system.

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*John Teeple. Reprinted from the February 1970 issue of the Junior College Journal, pp. 90-98.

In spite of the fact we are becoming a more service-oriented economy – a fact that is apparent in job trends as well as the vocational interest of our youth – the blue-collar worker will not disappear.

Not only can such general comparisons be made; we can also estimate the general magnitude of job openings in specific occupations assuming certain levels of expenditures and programs. In the case of health, continuing the current level of health services to the expanded population of the 1970's would provide employment for over 270,000 medical and dental technicians by 1975 – an increase of 66,000 over 1966. But expanded health services to achieve our goals in health for all of our people would require an additional 60,000 medical and dental technicians. To achieve such health objectives and to account for attrition of those now working, training agencies will need to prepare 21,000 medical and dental technicians annually in the next decade. Federally funded programs graduated trainees representing only 10 per cent of this requirement in 1967.

Assuming that we attempt to achieve national goals involving transportation, health, urban development, housing, and new applications of technology in the 1970's, we could expect major employment demand to be generated in the selected occupations designated in the table below.

Many other occupations will exhibit similar variety in the pattern of demand for new workers, and those occupations where little training is being offered in federally funded programs pose a challenge to the community college or junior college. Even if we do not attempt to achieve priority goal levels, estimated annual job openings in these occupations still far exceed outputs of federally funded programs. Since we cannot predict the precise level of priority which will be assigned to the nation's various goals in the next decade, these figures should be viewed as order of magnitude estimates. They should be used as general guidelines for planning future training programs which must also reflect the projected local employment needs.

How then do you plan the occupational emphasis of your future educational program since occupations which will show rapid growth in 1975 must be incorporated in plans today? The manpower and training implications of the pursuit of national objectives suggest those fields where occupational training will be relevant to employment potential. However, there are a number of other critical variables in the planning process. Consideration of these variables will help you clarify your planning decisions. They can be stated in terms of questions. In order to assess how many students you should train for each occupation in your area which is likely to experience an expansion of job openings, ask yourself:

1. How necessary is training for this occupation?
2. How available is training?
3. How attractive is the job to my students?
4. How well can I train them?

Let's look first at employment growth and the "how many" question. What do these national goals and manpower estimates mean for my school in Clinton, New York; Parsippany, New Jersey; or Augusta, Maine? The answer to that depends partly on American mobility. National estimates provide only a general frame of reference for interpreting local demand. If your students are highly mobile, however, national employment projections are probably fairly good benchmark figures, particularly for the northeastern area of the United States.

If your local area has employment characteristics which differ markedly from the economy as a whole, you may want to adjust the demand figures to suit your local needs. For example, if your school is near a large city where you know model cities or urban renewal programs are anticipated, the need for construction, health, and social welfare workers may be of greater importance than for a school forty miles west of Boston where electronic technicians, automotive repairmen, etc., may be relatively more

EMPLOYMENT DEMAND OF SELECTED OCCUPATIONS

Occupation	*Estimated annual job openings 1966-1975 (thousands)*	*Federally funded program graduates, 1967, as related to openings (per cent)*
Mechanics, other than auto	107	9
Nurses, professional	104	4
Carpenters	69	12
Technicians, other than electric	55	18
Office machine operators*	55	10
Mechanics, automobile	50	59
Practical nurses	47	40
Technicians, electrical and electronic	34	27
Heavy equipment operators	33	2
Policemen	29	3
Technicians, medical and dental	21	10

*Does not assume achieving specific national goals

important. Defining the local area in itself may be a task since the job market for a particular area may encompass several counties or several states, and depends more on transportation time than geographic distance or administrative unit. Whatever your job market, you should not limit your initial selection of occupations to those with large growth figures, for even occupations which grow slowly may exhibit many job openings due to attrition. If we look only at employment growth, we may make serious planning errors. For example, only about 250,000 carpenters will be needed for new jobs in the next decade, only 25,000 a year. However, due to the higher median age of carpenters, attrition is high and there may be as many as 70,000 job openings a year for carpenters if we attempt to achieve any goal of urban development. This is twice the number of electricians and electronics technicians who will enter the labor force annually, and more than four times the number of draftsmen and medical technicians who will enter the labor force annually, and more than four times the number of draftsmen, medical technicians, teacher aides, or firemen (see Table I).

Once you have a set of high opportunity occupations laid out, ask yourself if formal training is necessary for such employment. In two occupations with equal anticipated growth, that field for which training is a more rigid entrance requirement should have priority (other things being equal). Even if future opportunities for nurses are less than those for sales people, nursing might constitute a higher priority area for training than distributive occupations since many high school graduates without special training can enter the latter field. Such a procedure broadens the student's options: A trained nurse can usually also get a job in sales – a salesman cannot be a nurse without further training.

Another important consideration in the development or expansion of junior college occupational education programs is the availability of other sources of training at comparable expense to the student. For junior colleges are, of course, only one source of training. Postsecondary vocational schools, proprietary schools, industrial or company training programs, and special federally funded programs may all be doing occupational training in your area. Our studies indicate that there will be too many new jobs and new types of employment to indulge the luxury of duplicating our training efforts. For the chances are that if everybody is teaching nursing, nobody may be training mechanics or biological technicians. A coordinated look at the future with your counterpart administrators in other local training institutions may allow all of these institutions to perform a better community service. So, in spite of the fact that tremendous growth is expected in a field for which you can train, it may be better to let someone else do the job if they can expand a successful program which is currently in operation. A check of graduates from federally funded programs, as shown in Table I, is one input to this decision.

If you have decided that the occupation in question requires an expansion of formal training and that it is best made available in your junior college, you should next ask: Will my students take this course? One way of answering this question is to ask the students. Another approach is to run a quick comparison between the socioeconomic characteristics of your student body and the labor force currently employed in the occupation in question. In general, if these do not match, you will want to look further into employment trends before deciding to take on the course. The wage rates expected in the occupation also will influence your decision. While, generally, jobs requiring thirteen or fourteen years of schooling pay well, there is a wide variation in pay, for example, between practical nurses and electronics technicians. And projected shortages in an occupation may indicate poor wages rather than expanded employment opportunity. Generally, however, those occupations growing at the fastest rate will be accompanied by rising wage levels. Finally, lack of student interest in a growing occupation may simply reflect a lack of information available to the students. Occupational guidance counselors should therefore have access to the same job opportunity information that you use for planning.

Finally, there is the question of follow-up. Even though you may be able to answer all the previous questions in the affirmative, you should check to see whether your students in this occupational program actually enter the field–maybe salaries are too low, or there is a better source of training, or your graduates just are not competitive, or maybe you are really training them to do many other things. If your placement percentage is low, changes in your current program to increase the percentage of your graduates entering the field might be a wiser decision than expanding enrollment.

Now we come to the task: how to develop and implement a plan. The main caution is, not by yourself. Many people in a single community must share in this planning task: other educators, local employers, professional associations, and last but not least, students. One of your essential tasks is defined by the students' cry for relevance. Those concerned with occupational education have a big advantage over the four-year liberal arts colleges – for if you plan – jointly with other educators, industries, unions and advisers–asking yourself some of these questions, you are making your occupational educational program relevant to future employment. And of course, there are work-study programs, academic credits for service, guest lecturers, and small seminars which help. These techniques are well known. But a relevant plan and a meaningful education are two different things as you will see if you include some of your students as equal partners in this planning process. You will then be challenged by many other questions about meaning which I cannot ask but which must be answered with direct and immediate reference to your particular school. Nobody should pretend that incorporating students in planning is easy, for if they completely agree with your plans, you can bet they are not representative. You also may have to learn a new language. In the 1970's, students may be the most important and most vocal variable in occupational planning. But after all, it is their education and not ours, and given today's domestic situation, I cannot convince myself that our answers are necessarily right or the methods we practice appropriate.

Chicago's New Prosthetics Program*

The Southeast Campus of the Chicago City Colleges and the Northwestern University Medical School have developed an associate degree program in prosthetics. After a year and a half of planning, the program was implemented in September 1965.

Prosthetics is the field concerned with the design, fabrication, and fitting of artificial limbs. This two-year program is being offered cooperatively by Southeast College and Northwestern University. The Southeast campus will provide the background in general education, mathematics, science, and basic shop techniques. Northwestern will complement this with experiences in the area of specialization.

This curriculum has been approved by the American Orthotic-Prosthetic Association and subsidized by funds from the Vocational Rehabilitation Administration.

The objectives of the program in prosthetics are: (1) to prepare students for immediate employment in the field of prosthetics; (2) to provide a sufficient number of transferable courses to insure and encourage continuing education; and (3) to round out the student's background with an enrichment of selective general education experiences.

The type of student that we are looking for is one who has: (1) interest in prosthetics; (2) ability to reason; (3) mechanical comprehension; and (4) facility with words.

There are several unique educational features associated with this program. First of all, it can be considered a merger of health sciences with engineering technology. Next, it brings together a large university and a junior college to provide the community with a vital member of the rehabilitation team. More important, it involves a national professional organization, the American Orthotic-Prosthetic Association, and two schools working cooperatively to upgrade the profession.

The Southeast Campus of Chicago City Colleges will provide the first year of academic work exclusively. Besides general education, mathematics, and science, three courses dealing directly with prosthetics will be included. These will deal with prosthetic materials, metal fabrication, and prosthetic shop techniques.

During the second year, the student will spend most of his time at the Prosthetic-Orthotic Center of the Northwestern University Medical School. He will round out his general education at Southeast with courses in analytical mechanics, technical report writing, and fundamentals of speech. At Northwestern he will be provided with those experiences that deal directly with the techniques of design, fabrication, and actual fitting of an artificial limb.

By the very nature of the program, the student will gain a sufficient background of specialization to gain an entry job in the field of prosthetics. Prosthetists are employed within private establishments, hospitals, or rehabilitation centers. After a specified term of "internship," these graduates are eligible to apply for certification, which is granted by the American Board of Certification for Prosthetists, after rigorous examination. Upon certification, the prosthetist becomes a member of the rehabilitation team, which is made up of physician, prosthetist, physical therapist, and occupational therapist.

The curriculum in prosthetics gives the Chicago City Colleges and Northwestern University the opportunity to provide the community with a new and advanced educational program that enables our students to earn a better living and, in turn, provides a service whereby others may lead a better life.

**Chester Pachucki. Reprinted from the November 1965 Junior College Journal, pp. 14-15.*

CURRICULUM IN PROSTHETICS

First Year	*Credit Hours*
English composition	3
College algebra	3
General biology I and II	8
Prosthetic materials	3
Figure drawing and composition	2
General physics	4
Plane trigonometry	3
Metal fabrication	3
Prosthetic shop techniques	3
Orientation	1
Physical education	2
	35

Second Year	*Credit Hours*
Mechanics	3
Technical report writing	2
Fundamentals of speech	2
Below-knee amputation prosthetics	4
Above-knee amputation prosthetics	3
Hip disarticulation and hemipelvectomy amputation prosthetics	3
Ankle and partial foot amputation prosthetics	4
Upper-extremity amputation prosthetics	4
Juvenile amputee prosthetics	4
Human anatomy and kinesiology	4
Psychology of disabled	1
Business management	1
	35

Quinnipiac College, Hamden, Connecticut

Ambulance and Rescue Corpsmen Train at Dutchess*

A need for skilled ambulance and rescue corpsmen in New York's Dutchess County has spurred officials at Dutchess Community College in Poughkeepsie to organize a series of special training sessions. During the past academic year, the college twice presented ten-week programs to about eighty members of the county's ambulance corps.

"We had to organize such a program because in many communities, doctors are not available for emergency service, and the trend is for hospitals to abandon ambulance service," Emmett Waite, course coordinator, explained.

"This situation," he said, "has placed the burden of ambulance and rescue activities on groups of volunteer corpsmen, who are being organized in rapidly increasing numbers. There are now more than 400 such volunteers in Dutchess County."

The pilot program was developed in cooperation with the Dutchess County Ambulance Association and the Dutchess County Medical Society, organizations which have long realized the need for excellence of training. The project received financial aid from the Community College Health Careers Project of the New York State Department of Education. Because of this arrangement, the volunteer squad members who made up the classes had to pay a nominal tuition fee of only $15 each.

Goals of the course were to establish and maintain uniform standards of training for all units in the county; to instruct members of all units in the most advanced techniques in rescue and first-aid; and to teach effective uses of up-to-date equipment.

Each of the twenty squads in the county sent two participants to the pilot course, who would instruct other squad members upon completion of the program. Although there was diversity of age, background, and education, all members were interested in rescue work and a very important requirement, had passed the American Red Cross advanced first-aid course.

Dutchess Community College's "Fundamentals of Ambulance Rescue" brought to them a series of three-hour sessions arranged by a committee of ambulance corpsmen, doctors, and D.C.C. officials.

Robert Moseley, dean of the Evening and Extension Division; William Sippel, head of the nursing program; and Mr. Waite spearheaded a drive to schedule experts to talk about each of the course's topics. Three representatives of the New York City Fire Academy conducted sessions on rescue techniques, and an expert from the Poison Control Center at Kingston Hospital was in charge of a discussion on his special branch of medicine. Representatives of the county medical society and the ambulance association offered instruction in cardio-pulmonary resuscitation, handling of fracture cases, and medical and surgical emergency cases, including those dealing with obstetrics and pediatrics.

Tests administered before and after the course measured students' progress. Graduates of the program received "certificates of completion" to show the support and sponsorship of the groups involved.

Mr. Sippel said that participants and Dutchess Community College officials were nevertheless pleased with the results of these initial offerings.

The comprehensive community college, with its distinctive philosophy and objectives, is especially well suited to arrange a course like this that serves such an important need of the community.

**John Nadeau. Reprinted from the December-January 1967 issue of the Junior College Journal, p. 44.*

Planning a Dental Auxiliary Program*

In April 1965, the Junior College District of St. Louis, St. Louis County, submitted a proposal to the W. K. Kellogg Foundation for a three-year study of the allied-medical and allied-dental fields, looking toward development of curriculums for those occupations of greatest need and greatest adaptability to junior college training. The proposal was based in part on the expected advantages in student recruitment and motivation, and in breadth of possible training, which would be inherent in a multioccupational offering at a single location. The Forest Park Community College (the city campus of the three-campus district) was chosen as the site for the study group because of its location in the center of the medical and dental institutions of the city.

The first year of the study has now been completed. It has been conducted by an *ad hoc* group consisting of a coordinator from the field of hospital administration and three faculty members from the fields of physical science, life science, and social science, all devoting full time to the project. To date, eighteen occupations have been considered and information on these developed to varying degrees of completeness.

In the medical area the method of developing employment information has been primarily that of the personal interview—often in the hospitals. Because of the absence of a comparable central institution in dentistry, a different approach was needed; personal interviews were used to orient the study personnel and define the problems, and the final survey of need was done by mail questionnaire directly to the practicing dentist.

Early interviews, together with published information from the American Dental Association, had indicated three areas of possible need. These were: (1) dental hygienist, (2) dental (chairside) assistant, (3) dental laboratory technician.

Visits were made to dentists in key positions in the community and to several of the larger manufacturing dental laboratories which employed dental technicians to check those tentative conclusions. These visits established that:

1. The deans of the two local dental schools would have no objection to the junior college offering two-year curriculums in these fields even though one of the schools intends to offer a four-year curriculum in dental hygiene at a later date.

2. There was a strong interest on the part of the practicing dentist in getting more dental hygienists into the St. Louis area.

3. There was no interest on the part of the larger commercial dental laboratories in formal training for their potential employees, but strong interest on the part of certain practicing specialists in having their own technician.

As a result of these interviews, the questionnaire was drawn to cover all three auxiliary occupations. Arrangements were made with the local dental society to mail out the questionnaire with a cover letter from its president.

Out of a total of 935 questionnaires mailed, 29 per cent were returned within two months (the large majority of which came in within two weeks), which compares favorably with the response of 22 per cent and 32 per cent received by the American Dental Association in 1962 and 1964 to questionnaire surveys on similar subjects.

Tables I, II, and III summarize the responses to the dental-auxiliary questionnaire. Comments made by the respondents (not tabulated) will be discussed under the auxiliary classification to which the comment applies.

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*H.E. Davis and J.F. Coffey. Reprinted from the March 1967 issue of the Junior College Journal, pp. 26-29.

Dental Assistant: Conclusions which may be drawn from Table I are as follows:

1. On the average, each dentist in St. Louis uses 1.25 full-time and 0.32 part-time chairside assistants.

2. Fifty-eight per cent of the assistants receive a salary in the range of $250 to $349 per month.

3. Eighty-two per cent of present assistants are high school graduates who have been trained on the job by their employers.

Application of the ratio of assistants to dentists revealed that there were 1,250 full-time practicing dental assistants in the St. Louis area. Taking into account turnover and an assumed growth rate of 4 per cent per year, it was concluded that a total of 200 new dental assistants would be required each year. It was concluded that the junior college might train half of these, which would result in a demand of 100 full-time assistants per year from a junior college program.

The question of whether the dental-assisting curriculum should be two semesters or more elicited a great deal of comment. Several respondents took the position that it was a decision for the educational institution to make on the basis of its requirements to produce a well-rounded person. Others took strong positions for a three- or four-semester program, including liberal arts, on the basis that such a program was necessary to enable the assistant to deal properly with patients. Others preferred a minimum program on the basis that any added education would drive the starting salary up and make it necessary to raise fees. It was concluded, primarily on the basis of salaries and the fact that a two-semester program would be sufficient for certification, that it would be desirable to restrict the program to one year.

Dental hygienist: The following conclusions may be drawn from Table II:

1. Only 5 per cent of the dentists in the St. Louis area have the full-time use of a hygienist and 6 per cent have the part-time use of one.

2. Hygienist's earnings in the area are normally in excess of $500 per month. (Many respondents mentioned a standard fee of $30 per day, which would correspond to $650 per month on the basis of a five-day week.)

3. Most of the hygienists now practicing are graduates of a two-year program, often one to two years of college. This educational pattern, for the most part, is the one desired by the dentist.

The St. Louis area usage of hygienists (11 per cent, part-time and full-time) may be compared to a national average of 20.4 per cent and a Midwest regional average of 17.1 per cent as determined by a 1964 American Dental Association survey. Further corroborating information on the low ratio of hygienists to dentists in St. Louis was obtained from the 1964 Missouri State Roster of Licensed Dentists and Dental Hygienists which lists a ratio of .94 to 1 for St. Louis and a ratio of 0.11 to 1 for Kansas City.

A separate question in the questionnaire referred to the number of additional hygienists needed. Replies to this, when compared to the total dental population, gave a total desired hygienist population of approximately 200; the present population given by the state roster is less than 40. It was concluded that the questionnaire analysis may have exaggerated the shortage, due to a tendency for those dentists who feel the shortage most acutely (i.e., those equipped for, but now unable to get, a full-time hygienist) to be most apt to reply to the questionnaire, thus artifically raising the demand figures. Even on the basis of the comparative St. Louis-Kansas City figures, however, an additional

TABLE I

DENTAL (CHAIRSIDE) ASSISTANT

Basis: 254 replies from 935 questionnaires mailed

Present employment:	*Number*	*Per reply*
Part time	82	0.32
Full time	321	1.25

Present monthly salaries:	*Replies*	*Per cent*	
Up to 200	38*	10*	
200 to 249	52	14	
250 to 299	115	30	58
300 to 349	108	28	
350 to 399	36	9	
400 to 449	32	8	
450 to 499	2	0.5	
Above 500	2	0.5	
		100	

Present educational background:	*Replies*	*Per cent*
H.S. or H.S. + on-the-job training	274	82
H.S. + formal training for 1 year	34	10
for 2 years or more	27	8
		100

Desired educational background:	*Replies*	*Per cent*	
H.S. or H.S. + on-the-job training	53	23	
H.S. + formal training for 2 semesters	95	41	77
for 3 or 4 semesters	84	36	
		100	

*Stated by respondent, in most cases, to apply to part-time assistant only

.07 hygienists per dentist are needed, for a total of 70 additional hygienists. It was concluded that a hygienist population of at least 100 should be the target figure and that twenty graduates per year would be necessary to reach this target in a reasonable time and then maintain it in the face of the inevitable attrition.

TABLE II

DENTAL HYGIENIST

Basis: 254 replies from 935 questionnaires mailed

Present employment:	*Number*	*Per reply*
Part time	15	.06
Full time	14	.05

Present Monthly salaries (Full-time basis):	*Replies*	*Per cent*
Up to 300	2*	7*
300 to 349	0	0
350 to 399	3*	11*
400 to 449	2*	7*
450 to 500	3	11
Above 500	17	64
		100

Present educational background:	*Replies*	*Per cent*
H.S. + formal training		
for 2 years	7	37
for 3 years	9	47
for 4 years	3	16
		100

Desired educational background:	*Replies*	*Per cent*
H.S. + formal training		
for 2 years	28	37
for 3 years	43	58
for 4 years	4	5
		100

*Persons reported as hygienists in these salary ranges, although not so stated by the respondents, are probably actually working as chairside assistants.

Dental laboratory technician: Despite the strong interest expressed by some individual dentists in the preliminary interviews, the questionnaire return did not show a large demand for the dental laboratory technician. In addition, there was considerable doubt as to the validity of the analysis of the returns on this occupation since they showed a ration of technicians to dentists of about 0.18 to 1 versus a 1964 national average, as reported by the American Dental Association, of about .09 to 1. It is suspected that the returns on this point were biased by the tendency for those dentists equipped with a dental laboratory but unable to find and keep a good technician to be most apt to reply to the questionnaires. Furthermore, most technicians are men, and if they survive the initial period of adjusting to their profession, they usually stay in it for fifteen to twenty-five years. It was concluded that a maximum demand of perhaps twelve newly trained technicians per year could be expected, with the probability that the actual demand might be half that figure or less if the suspected bias of the questionnaire returns is eliminated or (as in the case of the dental assistant) if the figure is corrected for the fact that the junior college could train only a portion of the total demand.

Results of the questionnaire analysis which are believed to be valid are shown in Table III.

TABLE III

DENTAL LABORATORY TECHNICIAN

Basis: 254 replies from 935 questionnaires mailed

Present monthly salaries (Full-time basis):	*Replies*	*Per cent*	
Up to 300	4	16	
300 to 349	3	12	
350 to 399	4	16	
400 to 449	4	16	56
450 to 499	6	24	
Above 500	4	16	
		100	

Present educational background:	*Replies*	*Per cent*
H.S. or H.S. + on-the-job training	15	60
H.S. + formal training		
for 1 year	2	8
for 2 years	5	20
for 3 years	3	12
		100

Desired educational background:	*Replies*	*Per cent*
H.S. or H.S. + on-the-job training	2	6
H.S. + formal training for 2 years:		
as generalist	19	60
as orthodontics specialist	3	9
as ceramics-gold and/or crown and bridge specialist	8	25
		100

In summary, the questionnaire survey led to the following conclusions on the demand for junior college-trained dental auxiliaries in the St. Louis area:

Dental assistant: approximately 100 per year from a two-semester minimum program

Dental hygienist: at least twenty per year from a two-year program

Dental laboratory technician: approximately six per year from a two-year program, with the greatest demand in the area of the "generalist."

Information on this subject was obtained by interview with the local member of the state licensing board for dentists and dental hygienists and from publications of the Council on Education of the American Dental Association. Briefly, it can be summarized as follows:

Dental assistant: Dental assistants are certified by the American Dental Assistant Association of LaPorte, Indiana, after completion of at least two semesters of formal instruction in a school of dental assisting approved by the A.D.A. Council on Education, completion of a total of three years of formal instruction, plus work experience in dental assisting, and passing of a written and clinical examination administered by the association.

Certification is not at present an important factor in aiding the graduate to obtain a job but is expected to grow in importance as time goes on. Correspondence courses and correspondence examinations are no longer allowable.

Dental hygienist: A license is required to practice dental hygiene under Missouri Dental Laws, which state in part:

Such persons as shall become and remain duly licensed and authorized dental hygienists . . . may lawfully practice the operative procedures of dental hygiene under the continuous supervision and inspection of . . . legally qualified and licensed dentists . . . .

The operative procedures of dental hygiene are defined as:

The treatment of human teeth by removing therefrom stains and calcareous deposits, by removing accumulated accretions from directly beneath the margins of the gums, and by polishing the exposed surfaces of the teeth . . . .

In practice, the licensed dental hygienist is normally confined to the prophylaxes described above, the taking of oral x-rays (which the dental assistant may also do) and the preliminary charting of cavities for review by the dentist. In order to become licensed, an applicant must be over the age of twenty, be a citizen of the United States, be a graduate of an accredited four-year high school, have successfully completed the course of study of a school of dental hygiene approved by the Missouri Dental Board, and pass a written and clinical examination given by the dental board on the basic subjects taught in such schools.

As in any licensed occupation, the possession of the license is the *sine qua non* for practicing the profession. The curriculums in the approved schools are therefore directed primarily toward giving the student the information and skills to pass the licensing examination.

Dental laboratory technician: Dental laboratory technicians are certified by the Council on Dental Education of the American Dental Association. To be certified a technician must:

1. Complete at least two semesters of an academic program of instruction in an institution approved by the A.D.A.

2. Complete an on-the-job training program of at least one calendar year in length in a recognized educational institution or in a recognized commercial dental laboratory, or in some combination of the two

3. Work in the field for at least three additional calendar years

4. Pass an examination administered by the National Board for Certification of the Council on Dental Education of the A.D.A.

Certification is almost entirely ignored in the larger commercial dental laboratories. No facts are available on its status in the dentists' private laboratories; however, it is not believed to be important there, either.

The study is now at the stage of detailed planning of curriculums and facilities. On the basis of the demand-estimates previously given, planning is being based on training thirty-two dental assistants per year in a one-year program at each of three campuses and twenty dental hygienists per year in a two-year program at the central Forest Park campus. No immediate plans for dental technology are being made; the facilities at the central campus, however, are being designed so that a curriculum in dental technology for perhaps six graduates per year could be added at a later date with a minimum of alterations.

The survey approach taken in this study has two important advantages over the more usual institutional approach to curriculum offerings:

1. It has given a firm basis for setting the size of the program in each of the areas offered, with the resultant expectation that all graduates will be placeable in their profession in the local area.

2. It has given the practicing dentist a voice in determining educational policy for the dental auxiliary which he hopes to employ.

Model Job Description For The Physical Therapy Assistant*

Job descriptions are important to effective and efficient functioning of any administrative unit. This paper is offered as a guide to those who expect to employ a physical therapy assistant(s) within the physical therapy service. Job titles, supervisory designations, job summaries, and specifications will be constant. The duties may vary in accordance with: (1) the setting and organizational structure of the service; (2) the scope, size, and volume of the service; (3) the needs of the patients who are to be served.

Therefore, the duties, as listed, are illustrative, and should not be considered exhaustive or mandatory.

Job title: Physical therapy assistant

Immediate supervisor: The assistant is directly responsible to the physical therapist designated as his supervisor.

Job summary: The assistant is a skilled technical worker who performs physical therapy teratments and related duties as assigned by the physical therapist. This work is carried out with the directions of the physical therapist to whom the employee is directly responsible.

Job specifications:

1. Minimum educational requirements – Successful completion of a two-year college program for physical therapy assistants that leads to an associate degree and that has been approved by the American Physical Therapy Association
2. Licensure or registration requirements – Eligibility for state licensure or registration in the state where employed
3. Experience required – None
4. Physical requirements – Health status appropriate to the physical and emotional demands of the job
5. Affiliation with the American Physical Therapy Association by registration, certification, and/or membership
6. Promotion opportunities with recommendations of the physical therapist.

The function of the physical therapy assistant is to assist the physical therapist in patient-care activities and to perform such procedures delegated to him that are commensurate with his education and training. The extent to which the physical therapy assistant will participate in the following activities will be dependent upon the organization structure and size of the physical therapy service, and upon the health needs of the individual patient. He carries out designated tasks which are required for the operation of the service.

Some functions and tasks have been identified below by this committee as appropriate for the physical therapy assistant. A physical therapy assistant curriculum should be based on the levels of knowledge and skills which are required to carry out these functions and tasks as a safe beginning technical worker. The curriculum should incorporate such general education courses appropriate to the associate degree education within the particular institution that would enrich the personal growth and performance of the individual.

**From material prepared by the Committee on Supportive Personnel that was approved by the Board of Directors of the American Physical Therapy Association, 1740 Broadway, New York, New York 10019; and later published and distributed by AAJC grant from the W.K. Kellogg Foundation.*

FUNCTIONS OF THE PHYSICAL THERAPY ASSISTANT

Carries out physical therapy patient-care programs or portions thereof, as planned by and with the supervision of the physical therapist

1. Accepts responsibility for patient's personal care and environment throughout the treatment
2. Follows established procedure and observes safety precautions in the application and use of heat, cold, light, water, sound, and massage
3. Carries out positioning and reconditioning exercises
4. Trains patient in exercises, ambulation, and activities of daily living
5. Carries out treatment utilizing special equipment
6. Cares for braces, prostheses, bandages, and other active assistive devices
7. Observes, records, and reports to his supervisor the conditions, reactions, and responses related to his assigned duties
8. Acts as an assistant to the physical therapist when the physical therapist is performing tests, evaluations, and the complex treatment procedures

Carries out responsibilities appropriate to the established physical therapy service

1. Participates in clerical and reception activities
2. Complies with procedures for maintenance of supplies and equipment, and carries out duties necessary to comply with the related needs as delegated to him
3. Maintains surveillance of environmental conditions within the physical therapy service
4. Displays appropriate attitudes and behavior.

PHYSICAL THERAPY ASSISTANT TASKS RELATED TO FUNCTIONS

Carries out physical therapy patient-care program or portions thereof, as planned by and with the supervision of the physical therapist

1. Accepts responsibility for the patient's personal care and environment throughout the treatment
   - Is concerned about the maintenance of patient's safety and comfort
   - Assists with bowel and bladder care when in physical therapy department
   - Performs first-aid procedures when required
   - Utilizes supplies and equipment appropriately
   - Assists the patient in preparation for, and as necessary during and at the conclusion of treatment
   - Transports the patient when required
2. Follows established procedures, and observes safety precautions in the use and application of heat, cold, light, water, sound, and massage. Applies and removes: hot packs, cold packs, infrared, diathermay, microwave diathermy, paraffin, ultraviolet, ultrasound. Hydrotheraphy including: whirlpool, Hubbard tank, contract baths, therapeutic pool, moist air, and massage
3. Carries out preventative and supportive care programs:

   Positions the patient

   Performs passive range of motion

   Uses splints, sandbags, pillows, hiprolls, sheepskin, etc.
4. Trains the patient in predetermined exercises: correct body alignment and body mechanics, active range of motion; resistive exercise with equipment, general conditioning, group exercises, special routines, breathing and postural drainage, coordination and pendulum exercises, back exercises. Trains the patient in ambulation and elevation skills: measures and adjusts crutches, canes, and walkers; trains the patient in balance and other activities preparatory to ambulation; trains the patient in gait patterns; trains the patient in elevation activities. Trains the patient in activities of daily living: wheelchair activities, transfer activities, self-care activities
5. Carries out treatment utilizing special equipment: tilt table, special beds, and frames; performs traction: cervical, lumbar
6. Cares for braces, prostheses, bandages, and other assistive devices
   - Applies and removes assistive and supportive devices
   - Applies and removes bandages and dressings
   - Makes simple devices and equipment, e.g., built up utensil, sandbags, home pulley.

7. Observes, records, and reports the patient's condition, reactions, and responses to the physical therapist

   - Reports verbally and in writing the patient's response to treatment as well as other observations
   - Accurately determines and reports the patient's vital signs (pulse, temperature, blood pressure)
   - Uses records as privileged information
   - Attends and participates in staff meetings as assigned

8. Acts as an assistant to the physical therapist when the physical therapist is performing tests, evaluations and complex treatment procedures. May record test results as directed

   - Prepares patients
   - Assembles the tools and supplies which are needed for the particular test or procedure which is to be done
   - Follows directions related to recording and positioning of the patient
   - Anticipates the sequences in the testing or treatment procedures

Carries out responsibilities appropriate to the established physical therapy service

1. Participates in clerical and reception activities

   - Assists with scheduling of equipment and patients
   - Suggests work simplification practices
   - Performs office procedures as required

2. Complies with procedures for the maintenance of supplies and equipment

   - Maintains an adequate inventory
   - Orders supplies as necessary
   - Cares for equipment
   - Recommends replacement of equipment

3. Maintains surveillance of environmental conditions within the physical therapy service

   - Follows established procedures for safety and emergency
   - Follows infection and pest control procedures
   - Maintains adequate light, temperature, and humidity
   - Identifies potential hazards and takes appropriate action

4. Displays appropriate attitudes and behavior

   - Complies with ethical and legal responsibilities and restrictions
   - Complies with established lines of authority, supervision, and communication
   - Maintains appropriate personal appearance and conduct
   - Maintains approproiate interpersonal relationships.

SUPERVISORY RELATIONSHIPS IN PHYSICAL THERAPY

The physical therapist is by virtue of his education, experience, responsibilities, and employment situations has certain supervisory responsibilities for which he is accountable. He is responsible and accountable for patients referred to him, and when any portion of a care program is delegated to supportive personnel, he holds the obligation for continuing direction of that care.

Physical therapy services are established in many different settings. It is imperative that guidelines and procedures be established which will spell out the functions and responsibilities of the levels of physical therapy personnel and the supervisory relationships inherent to the function of the service.

The physical therapist who is the director of the service has responsibility to many individuals within that framework. These are the administrator of the facility; the physician; the patients; the other physical therapists; the physical therapy assistants, aides, and clerical staff.

To the administrator: The supervising physical therapist must assure that the objectives of the service are efficiently and effectively carried out within the framework of the stated purpose of the agency.

To the physician: The supervisor must ensure that the patient evaluation and treatment programs are carried out in accordance with medical referrals and direction.

To the patient: The supervisor must maintain a high level of quality care directed towards patient welfare.

To the staff: The supervisor must interpret administrative policies, act as liason between line staff and administration, and provide for the growth of the staff.

The effectiveness of the supervisory process is interdependent. In order for it to be an ongoing and helping relationship, all staff must function in complete cooperation with each other, and with an understanding of the goals of supervision and responsibilities of each staff member.

THE PHYSICAL THERAPIST AND THE PHYSICAL THERAPY ASSISTANT

The physical therapy assistant works within the physical therapy service which is under the direction of a physical therapist. The assistant is responsible to and supervised by the physical therapist.

The physical therapy assistant participates in carrying out the objectives of the service by performing duties which are commensurate with his education and which are delegated to him by the supervising physical therapist. The supervisory relationships has as its goals: (1) maintenance of quality care for patients; (2) efficiency in departmental operation; and (3) technical development of the assistant staff.

The type of supervision will vary depending upon the setting of the service. In a medical facility with an established physical therapy service offering care to in-and outpatients, observations of treatments, conferences related to patient progress, verbal reports of progress, and written reports will flow easily between the physical therapist and the physical therapy assistant. The frequency of the observations will be dependent upon several factors: (1) the complexity of the needs of the patients under care; (2) the experience of the physical therapy assistant; (3) the proximity of professional supervision in the event of emergency or critical events; and (4) the type of setting in which service is provided.

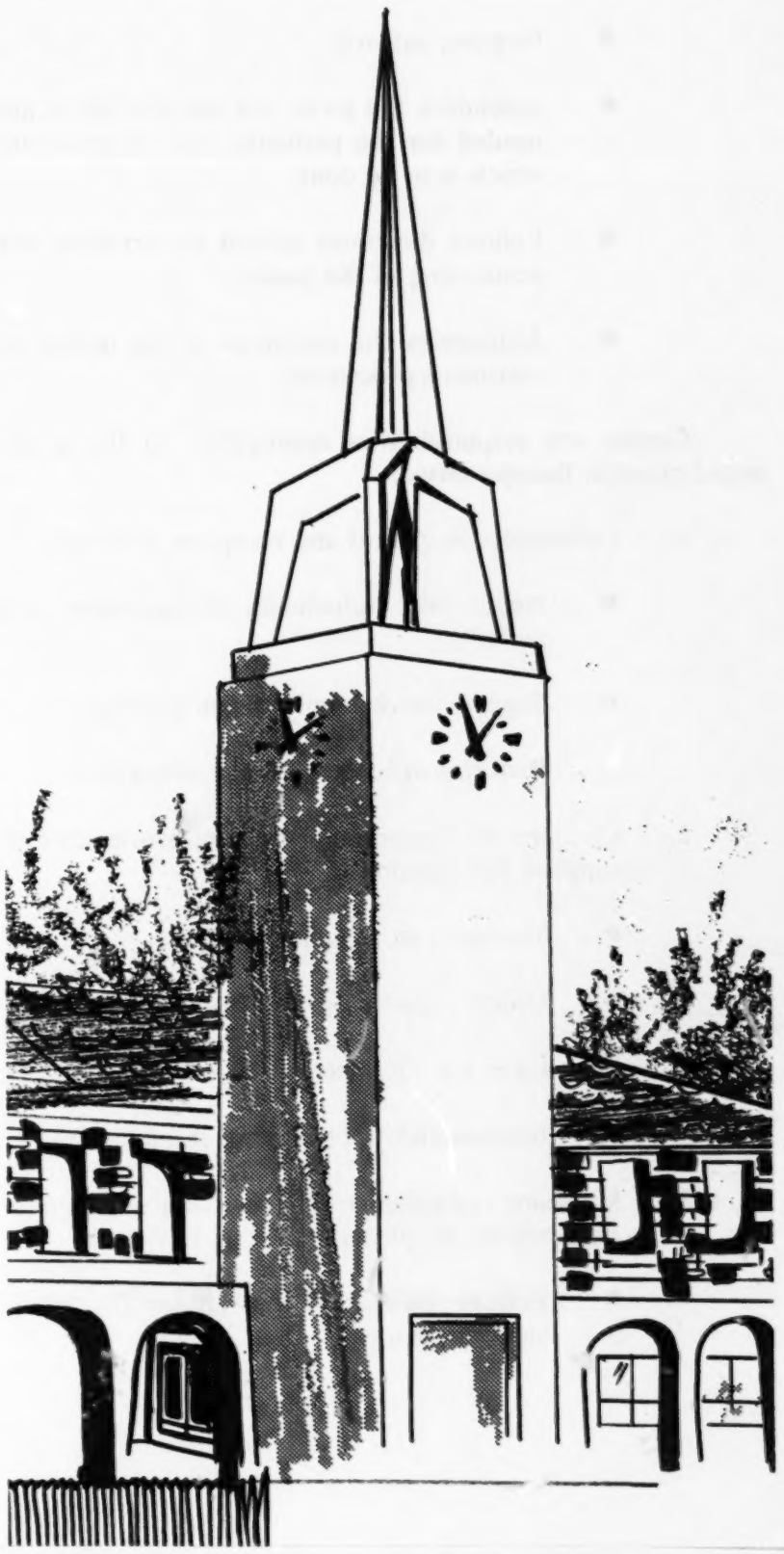
In the established physical therapy service where the physical therapist and the assistant are *not* continuously within the same physical setting, greater emphasis in directing the assistant will be placed upon frequent reporting – both verbal and written. However, in order for there to be effective supervision, frequent observations of the care rendered must be included.

The physical therapist holds responsibility for the following regardless of the setting in which service is given:

1. Interpretation of physician referrals
2. Initial evaluation of the referred patient
3. Development of the treatment plan and program including the long- and short-term goals
4. Selection of the appropriate portions of the program to be delegated
5. Instruction of the assistant in the delegated functions to be carried out: precautions, special problems, contradictions, goals and anticipated progress, plans for reevaluation
6. Supervision of the assistant
7. Reevaluation of the patient and adjustment of the treatment plan with the assistant present
8. Arrangements for reports (written and verbal) from the assistant through the physical therapist to the physician
9. Provision for opportunities for the growth of the assistant through in-service and continuing educational experiences.

Failure on the part of the physical therapist to accept and carry out these responsibilities will place unjust responsibilities upon the assistant.

Quinnipiac College, Hamden, Connecticut



Administrative Support In Establishing A.D.N. Programs*

Community junior colleges, in recognition of their community service function, have been responding to the need for nurses prepared at the technical or semiprofessional level by establishing associate degree programs in nursing. More colleges must become involved in this educational effort.

The Surgeon General's Consultant Group in Nursing, in its 1963 report, declared that a quantitative and qualitative shortage of nurses exists in the United States.[1] The report recommended a 445 per cent increase in graduates from associate degree nursing programs by 1970, or an increase from the 917 graduated in 1961 to 5,000 by 1970.[2] The consultant group found that the existing programs could not accommodate this projected enrollment so additional programs would need to be established.[3]

The factor which will strongly influence the successful establishment of new associate degree nursing programs will be the quality of administrative support within the colleges. In a study which identified the factors which have led to or deterred the establishment of associate degree nursing programs in community junior colleges it was found that there were no substantial differences between seventy-three colleges which had made a decision not to establish a program, one hundred and twenty-six colleges which were still considering whether to establish a program, and sixty-six colleges which had been successful in establishing a program. Colleges in all three categories had encountered similar, discouraging factors as they explored the feasibility of establishing a nursing program.[4]

The study demonstrated that administrators who had successfully initiated a program had used imagination and knowhow to overcome obstacles. Apparently these administrators had been determined not to let anything stand in the way of their goal. As one of them said, "If you have proper hospital resources in your community and they are willing to cooperate with you in organizing a two-year program, then there should be no other obstacle to overcome."

The two factors which were most discouraging to administrators in all three categories of colleges were the estimated cost of the program and their overcrowded college facilities. It was assumed that administrators who had successfully established a nursing program had found ways to overcome these obstacles. These administrators were generous in sharing their experiences.

The publicly controlled colleges could count on tax support. In some situations it was simply a matter of including a budget item in the overall college budget. One college was able to secure a levy from the county to underwrite the cost of the proposed nursing program. One administrator said their college had controlled costs by giving attention to the size of classes. They analyzed the proposed nursing program so they could provide adequate-sized lecture groups to offset the smaller clinical groups.

Another administrator said their college was operating with a surplus so they felt justified in spending their "extra" money for a nursing program. The claim that the budget would stretch to cover the cost of the new program had to be justified to the controlling board of the college as well as the state controlling authority. In several public colleges financial assistance was received through a foundation grant. More will be said about this later.

One public college "took over" a hospital-controlled nursing program and prorated the cost over a four-year period. During the first and second years the cost was borne equally by the college and the hospital. During the third and

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**Mildred Schmidt. Reprinted from the May 1966 issue of the Junior College Journal, pp. 20-23.*

fourth years the college assumed 66 per cent of the cost. By the fifth year the total cost of the program was paid by the college budget.

An administrator of another public college related his strategy as follows. From an administrator friend he found out the cost of operating a nursing program and brought this information to a group of influential local businessmen. They offered him unqualified support believing this was a worthy way to spend the taxpayers' money. Then, he presented a proposal to the governing board of the college, with the information that the local townspeople supported it. The governing board promptly gave their approval and earmarked the necessary funds.

One administrator of a publicly controlled college found it was a matter of selling the nursing program to the community, the board of education, and the administration. He found that a survey of nursing needs in the community was very helpful. He also said the support of the hospital directors and staffs, and the medical profession was extremely helpful in selling the high cost of a nursing program to the taxpayers of the local school district. He pointed out that *selling* and *information* were the key words in preparing all concerned.

The private colleges could not finance a nursing program through tax funds. They had to use other means. In one private institution the program was planned to fit into the college's trimester plan with three limited enrollment dates per year. The administrator believed the use of this calendar might prove helpful in ameliorating the otherwise excessive cost of the program.

In another private college the administration came to the conclusion that because nursing students would be in education courses with other students, the cost per student for these classes would be the same as for all. Because of the small groups in clinical situations, they predetermined that the cost for this portion of the educational program would probably be about twice that of the college average, though not much higher than such courses as welding and other shop courses. The administrator said the college board seemed to realize that costs for various types of courses were different.

In a church-related college, the administrator said most of their support came from individuals, churches, and organizations. He said many individuals and groups were interested in nursing programs and were willing to assist in a financial way. The college, therefore, gave special emphasis to promoting the nursing program, and found that the interest and support for the college definitely increased.

Only one private college mentioned increasing tuition. The increase was $100 which raised the yearly tuition from $400 to $500.

Approximately half of the colleges which had nursing programs had received a financial subsidy for the early years of the nursing program, while about 40 per cent had received no subsidy. The W.K. Kellogg Foundation was the most frequent source of the subsidy which, in over half of the institutions, had been available for a one-year period. The subsidy had made it possible for the college to hire a nurse-administrator and several nurse-teachers for a pre-planning period prior to the admission of students. Pre-planning for the nursing curriculum has become a generally accepted practice and was one of the aspects of the program selected for financial support when the Kellogg Foundation gave grants to four states in 1959 to aid in the development of associate degree nursing programs. Three-fourths of the administrators from colleges obtaining subsidies for nursing said their colleges no longer received any kind of financial subsidy for the program. In approximately 80 per cent of the colleges, the nursing program was supported in the same way as all other programs. Administrators from three-fourths of the colleges said the nursing program was more expensive to operate than were other programs in the college. More than half of these administrators based their replies on a cost-estimate of the program, and about one-third on a systematic study of costs.

The findings in this study support the statement that "operating and capital requirements of technical curriculums are 50 per cent to 100 per cent higher than of liberal arts curriculums."[5] The findings also support the basic assumption of the Cooperative Research Project in Junior Community College Education for Nursing that community colleges can support all other programs.[6] The study revealed that administrators had been able to deal effectively with the cost factor.

Administrators from colleges which had established nursing programs did not let lack of space discourage them. Two of them had rented space near the campus, one in a Red Cross Building and the other in a local hospital. The latter had included a temporary dormitory, nursing laboratory, and classrooms. Another administrator earmarked a classroom in a new science building for a temporary nursing classroom. One college shifted some classrooms to make space for a nursing laboratory and classroom. In another institution the county school board had advanced funds to provide temporary-type physical facilities. By careful scheduling and better utilization of space in another college, a class was accommodated.

It was found that the opinions of administrators from colleges with a nursing program had been a crucial, discouraging factor for administrators of colleges which eventually decided not to establish a program. More than a third of the administrators who had made a negative decision regarding the program had done so after talking with administrators who were conducting programs. In contrast, only one administrator from a college conducting a program indicated he had been discouraged about starting after talking with a fellow administrator. Whether the administrators who had made negative decisions were justifiably discouraged is not known, but this finding emphasizes the importance of the consultative role college administrators perform among their peers.

Colleges which were still considering establishing a program indicated one of their chief obstacles was their list

of priorities covering future plans which did not provide for establishing a new program at that particular time. The hard-pressed administrators of today who are seeking ways and means of expanding curriculum offerings and accommodating rapidly increasing enrollments must consider the costs of any contemplated new programs. When costs are an important consideration in a situation, there is always the possibility that a less costly program will be inaugurated rather than a more costly program. This happened in several colleges. One administrator said, "When considering the cost of nursing programs, other programs had priority." Another said, "Overall planning put other occupational programs ahead of nursing because of demand, less cost, etc."

A third of the administrators from colleges which had successfully started a program indicated that for them a serious obstacle had been finding a qualified nurse-administrator. This was an obstacle for only 10 per cent of the colleges in the other two categories. This variation probably existed because administrators who had not established nursing programs had not gotten far enough in their planning to try to hire a nurse-administrator. If they had begun an active search they, undoubtedly, would also have selected this factor as one of their most discouraging. The number of graduates from nursing programs leading to a master's degree is pathetically small: 1,282 in 1963-64.[7] This is an extremely small increase over the academic year 1959-60 when only 1,197 students were graduated.[8] From this pool of master's degree graduates must come the teacners for schools of nursing as well as the nursing-service administrators for hospitals. One can understand why the shortage of qualified nurse faculty is critical.

The community's need for nurses is an important factor which contributes to the successful establishment of an associate degree nursing program. Seventy per cent of the administrators from colleges which had successfully established programs gave this as their reason for considering the program. This reason was mentioned by about 50 per cent of the administrators in the other two categories of colleges.

It is important that college administrators know where to turn for assistance during the period when they are exploring the feasibility of establishing a nursing program. It was found in this study that successful administrators had been more knowledgeable concerning the appropriate sources from which to seek assistance and had used a greater variety of assistance than had administrators from the other two categories of colleges.

Hospitals and hospital-connected individuals, groups, or associations had been a valuable source of assistance to more than 50 per cent of the administrators in colleges which had established a nursing program. Assistance of hospitals had been mentioned by only a third of the administrators from the colleges which had decided not to establish nursing programs. Nursing programs cannot be established in colleges without the cooperation of local hospitals which serve as the laboratory for teaching of nursing. It is vitally important that the cooperation of these hospitals be sought during the exploratory period.

Approximately half of the successful colleges mentioned the state board of nursing as a valuable source of help in contrast to about a quarter of the colleges in the other two categories. The associate degree nursing program prepares its graduates to be licensed in the practice of nursing; therefore, the educational program which prepares the graduate must be approved by the board of nursing of the state in which the program is located. Without the encouragement and support of this board, it is very difficult for a college to successfully inaugurate a nursing program.

The National League for Nursing was considered a valued source of assistance by approximately 40 per cent of the colleges with a nursing program in contrast to less than 30 per cent of the colleges in the other two categories. The services the N.L.N. has offered have included consultation, workshops, and publications. In many states the services of this organization have been the only help available to colleges interested in getting involved in this type of nursing education.

It was found in this study that more than twenty-five per cent of the administrators who had established a nursing program had used seven different sources of assistance. Only three sources had been used by more than twenty-five per cent of the administrators who had decided not to proceed, and two sources had been used by more than twenty-five per cent of the administrators who were still undecided.

College administration must be willing and prepared to carry out many planning activities before finally making the decision to proceed with the inauguration of a nursing program. Three-fourths of the successful college administrators in this study had undertaken at least ten activities during the exploratory period. Two activities had been undertaken by 100 per cent of the administrators. These activities were: officially notifying the state board of the college's interest in establishing a nursing program, and projecting budget and staffing needs for the proposed program. More than 90 per cent of the administrators had arranged for hospitals in the community to be surveyed to determine their adequacy and willingness to cooperate in having their facilities used for the teaching of nursing.

There was no clear pattern in the sequence with which planning activities had been undertaken, but it was found that 60 per cent of the colleges which had established a program had as their first step done a community survey to determine the need for an interest in having the college establish a nursing program. This is in the tradition of the community junior college. Need is determined through community surveys.

The influence of college administration was evident throughout this study. It led to the conclusion that the quality of administrative support appears to be the hidden factor which greatly influences the successful establishment of associate degree nursing programs in community junior colleges.

College administrators who want to determine the feasibility of establishing an associate degree nursing program

in a particular community junior college can be assisted in decision making through the use of criteria developed from the experiences of those who have been interested in establishing nursing programs. Planning time can be conserved by college administrators who have had no previous experience in establishing a nursing program if they use a list of suggested planning activities which should be undertaken before a decision is finally made to establish or not to establish a nursing program.

FOOTNOTES

[1]Public Health Service. *Toward Quality in Nursing: Needs and Goals.* Washington, D.C.: United States Government Printing Office, 1963. p. 3.
[2]*Ibid.*, p. 22.
[3]*Ibid.*, p. 35.
[4]Schmidt, Mildred S. "Factors Which Have Led to or Deterred the Establishment of Associate Degree Programs in Nursing in Community Junior Colleges." Doctor of education project report, Teachers College, Columbia University, New York, 1965. (Unpublished)
[5]Mushkin, Selma J. "State Financing of Higher Education." *Economics of Higher Education:* United States Department of Health, Education, and Welfare. Washington, D.C.: Government Printing Office, 1962. pp. 218-249.
[6]Montag, Mildred L. *Community College Education for Nursing: An Experiment in Technical Education for Nursing.* With Part II by Lasser G. Godkin. New York: McGraw-Hill Book Company, 1959.
[7]National League for Nursing. "Educational Preparation for Nursing." *Nursing Outlook* 12:63; September 1965.
[8]*Ibid.*

Daytona Beach Junior College, Daytona Beach, Florida

A Planning Year For Registered Nursing Programs*

Are you considering the addition of a registered nursing program to your junior college? If so, I would like to offer some firsthand information which may be helpful to you since my planning year for the R.N. program at College of Marin in Kentfield, California, was recently completed.

The success or failure of a junior college nursing program must be related to a planning year. The California Board of Nursing Education and Nurse Registration requires that the chairman of the proposed program be employed one year before students are admitted. These twelve months are essential for the development of the cirriculum, the arrangement for the use of clinical facilities in the community, the attainment of state board approval, the recruitment of faculty and students, the plan for a nursing laboratory and classroom on campus, the choice of uniform, and the selection of library holdings. Because the above requisites are of utmost importance, it is imperative that a chairman with a background in administration of junior college nursing programs be employed. Certain universities throughout the United States have programs which include a major in administration of junior college nursing programs. Recruitment from these programs should be advantageous to you.

The following tasks of a newly appointed chairman are of paramount importance:

1. Establishment of a good advisory committee
2. Gaining community acceptance of the program
3. Procurement of faculty support
4. Selection of qualified faculty
5. Selection of criteria for the admission of students.

**Shirley Conklin. Reprinted from the March 1967 issue of the Junior College Journal, pp. 16-18.*

Choice of membership on an advisory committee is worthy of careful consideration. Although some programs choose to have a large membership, I have found real success in starting with a committee of only twelve members. These members represent education, hospital administration, public health, the county medical society, and the local nurses' association. The addition of representation from other groups, i.e., the public at large as the recipient of nursing services and women's volunteer groups from the local hospitals, will be considered in the future.

Nurses should not predominate in the membership of the advisory committee any more than any other particular group. However, the chairman of the group is naturally elected by the committee, and hopefully this person has a professional knowledge of nursing education trends. This background will help to promote the activities of the group faster than if a person less knowledgeable about nursing education is elected.

Our advisory committee met monthly for six months and continued on a monthly basis for the first year after students were in the program. This wise decision was a recommendation from our college president who has attended each meeting thus far. In the planning year, the committee helped a great deal with publicity, worked toward acquiring equipment for the program, and made a concerted effort to thoroughly understand this kind of nursing education and what it will mean to both the students in the program and to the community.

The president of a junior college may not realize the implications of public acceptance of an R.N. program unless he has previously worked with nursing groups. Winning support of the lay community by speeches, newspaper articles, interviews, and the like may be simple, but acceptance of the nursing program by the health professions themselves sometimes presents a problem. Because of the innovation of nursing education programs in junior colleges,

nurses and doctors accustomed to the more traditional forms of nursing education are often reluctant to accept the newer concept.

Talking to groups such as the working staffs at the local hospitals, the local nursing association, the local medical society, and the medical auxiliary, helps to dissolve some of the false conceptions concerning associate degree programs in nursing. A frank question-and-answer period while talking to any group allows the opportunity for everyone to air his beliefs and concerns.

Acceptance comes more readily when as many groups as possible, particularly those in related health fields, are reached from the very beginning of the planning year. Those in nursing education have sometimes separated themselves too far from the other members of the health team, and they should not invite misunderstanding by continuing to do so.

This task is indeed an important one. If your junior college is a fairly new one dedicated to the current philosophy of junior college education, you may have few problems. However, if your college boasts a lengthy history, one in which emphasis for years has been on transfer education alone, you may have a more difficult time getting your faculty to accept the concept of technical-vocational, terminal programs. The fact that the nursing program is expensive and requires a planning year may add to the discontent of other faculty members. The necessary employment of the first teaching instructors at least six weeks in advance of the first teaching year requires a great deal of explanation.

This brings to attention the problem of costs. Any preplanning the administration can do to ease this situation should be investigated. It would be wise for a college president to seek community funds, particularly for the planning year. In our situation, we were given a $15,000 grant for the planning year from a private endowment, and this same amount has been granted again for the first school year. The first two or three years of an A.A. nursing program are the most costly, but after expenditures for capital outlay have been met, costs should begin to diminish. Liberal arts courses are the least expensive to a college; when technical-vocational programs are introduced, the board of trustees must realize then that disbursements for running the college will increase.

Some capital outlay can be met without cost to the college. Mainly through the efforts of our advisory committee, we have been able to secure beds and bedside equipment on "permanent loan" from one of the participating hospitals, and we were given an overhead projector, a tape recorder, and slide projector from the women's auxiliary of the county medical society. Some of the large surgical dressing companies have given us samples of their materials to use as teaching aids. A plea to the nurses in the community has brought forth several years of back issues of all of the nursing journals thus eliminating the cost for their purchase. These generous gestures from interested individuals and groups have helped to eradicate what would have been large initial costs.

It is difficult for some faculty members to understand why the small student-teacher ratio is necessary in this kind of program. For example, a history teacher cannot always understand why it is possible to teach history to a large group of fifty or more students, while the teacher of nursing can have no more than ten students in the hospital laboratory setting. It is necessary to explain that it would be impossible for a nurse teacher to observe, supervise, and teach large numbers of students as they give medications, administer complex treatments, or perform the daily basic functions required for all patients. When human lives are at stake, one cannot jeopardize the safety of the patient. Discussing this with faculty members on an individual basis often promotes their understanding. I invite involved faculty members to visit the clinical situation.

The shortage of qualified faculty members for associate degree nursing programs remains acute. While universities are attempting to graduate more and more qualified teachers, it will be some time before the supply meets the demand. This does not mean, however, that the president must resign himself to settling for second-best. A letter from the president to those universities offering junior college preparation at the master's level often provides him with a list of job-seekers from whom he can make a selection. To hire teachers for junior college programs when they have had no experience teaching in a college could prove harmful. Often, this type of teacher reverts to older, traditional methods in her teaching and often is not in accord with junior college philosophy. A person with previous teaching experience can more easily obtain a teaching credential, and it should be remembered that student-teaching experience in the master's program often meets state requirements for teacher experience.

Beyond the academic requirements for nurse faculty, the following criteria require utmost consideration. The college should look for teachers who:

1. Are willing to accept the philosophy of junior college education for nurses
2. Will strive to work with other faculty members rather than isolating themselves with nursing faculty alone
3. Have the desire to experiment without the fear of failure and who are flexible in their teaching methods
4. Recognize the importance of participating in college and community affairs, thereby brining knowledge and understanding of the nursing program to other groups.

I selected two teachers to begin with the first fall class, one with several years of teaching experience plus an academic background in junior college preparation and a recent graduate of a master's degree program who did her teaching in an associate degree R.N. program. These two teachers were hired to begin six weeks before registration so that they could acquaint themselves with the policies and proce-

dures of the two participating hospitals. The third instructor began in the second semester of the first year. When the program accepts its second class in the fall of the second year, three more teachers will be hired, for a total complement of six.

Although I hope to encourage as much flexibility in teaching as possible, I planned to implement team teaching from the very beginning. Even though each teacher has her specialty, each can offer a great deal to the other nursing courses by virtue of her education and experience in a particular field. This method tends to lessen fragmentation from teaching and helps to foster the concept that a patient is more than a surgical patient, or a psychiatric patient, or a medical patient. The patient often has multidisciplinary problems that can best be solved by a multidisciplined nurse.

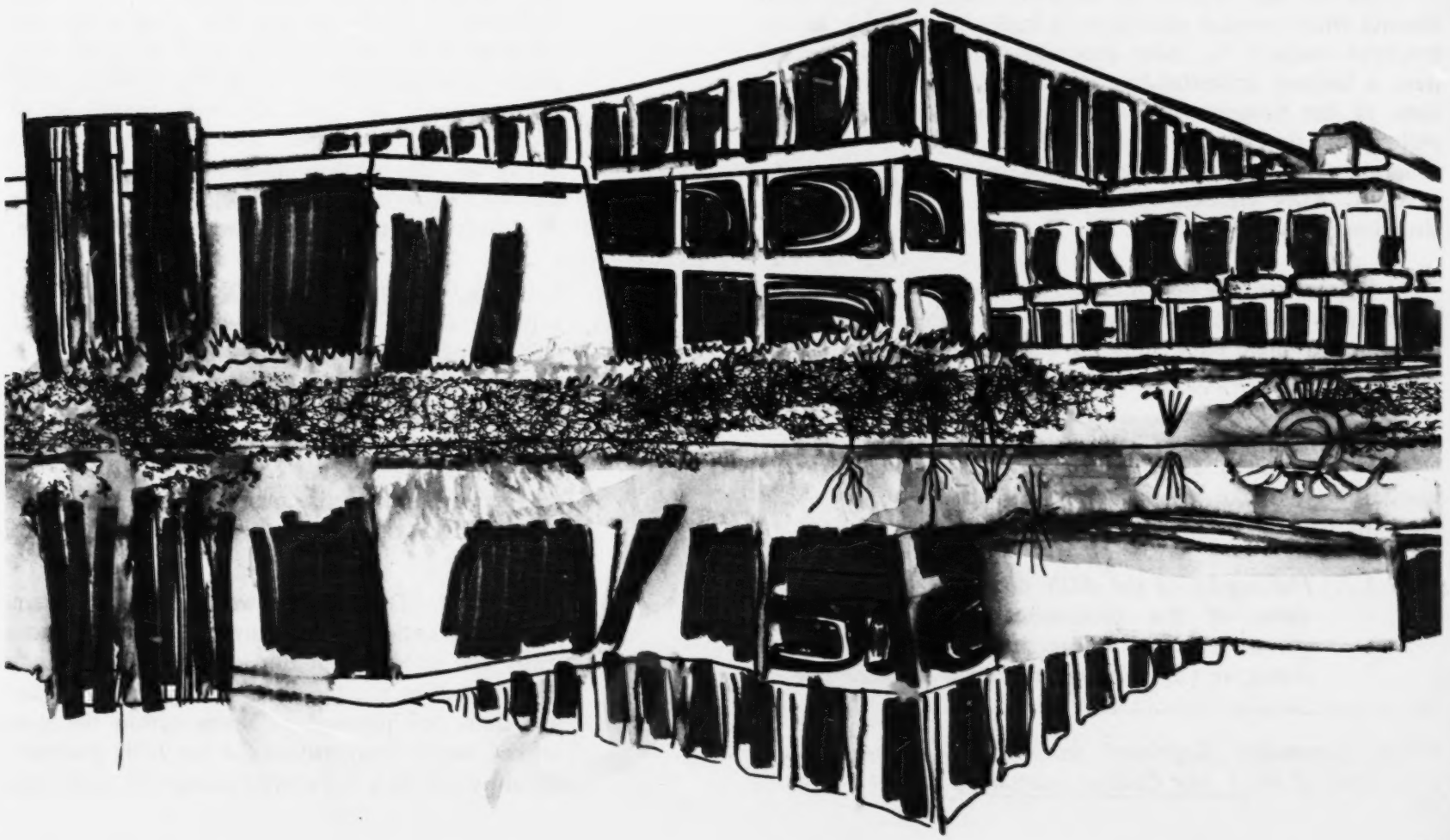
Although there are those who believe that the philosophy of junior college education means that every applicant must be accepted for any type of program he desires, I do not interpret the philosophy in this way. A junior college with many kinds of diversified offerings has a place for all who can profit from a particular kind of education. It is far too costly in time and energy to accept students in the registered nursing program who appear unqualified. College attrition is already too high without adding to the problem.

It has been helpful to work with the college counselors in determining standards the applicants must meet although the nursing chairman has made the final decisions as to what these criteria should be. One of the school counselors was assigned to the incoming class, and during the next few years, we plan to work together in studying test data, transcripts, and other evaluative criteria in order to arrive at a more objective set of admission standards based on the nursing students in this particular college community.

Although each state sets up its minimum requirements for students of R.N. programs, individual colleges have flexibility in setting their own requirements. Until proven otherwise by research data, it would seem that emphasis should be placed on a good high school transcript with average to above-average grades in the major areas of science, mathematics, and English. Almost as important are the preentrance college test scores with special emphasis on verbal skills and eligibility for the college level English course. Of less importance but contributory to the overall evaluation are the personal interview, the physical examination, and references.

The planning year, then, is utilized extensively for community and college involvement as well as for careful selection of faculty and students. The need for this planning period cannot be minimized. Enthusiasm and commitment by the college administration and board of trustees is of paramount necessity. When the appointed chairman has the support of the college and the community, one may rest assured that an associate degree program in a junior college will be an exciting adjunct to the total program.

Miami Dade Junior College, Miami, Florida



Issues for Teachers In Associate Degree Nursing Programs*

Changes in nursing education have been necessary to meet the needs of a changing society. One way educators have responded to this challenge was to initiate associate degree nursing (ADN) programs within the community college. As of March 1, 1967, a total of 241 ADN programs had been initiated in the United States over a period of approximately ten years.[1] This growth has significantly increased the supply of nursing personnel and in itself, is evidence that many sound educational goals have been accomplished.[2]

As in any period of growth, problems have been created which require resolution. A major issue is the lack of prepared teachers for these programs.[3] Many ADN teachers have a limited understanding of the philosophy and objectives of the program, and give little thought to how this philosophy determines the manner in which they should function within the framework of the community college. As a result, ADN teachers often experience philosophical and situational conflicts.

Prospective teachers must be made aware of conflicting issues before accepting a position in an ADN program. The teacher will then have time to explore the problems and decide if this is the type of program to which she wishes to be committed.

Five problem areas which require resolution if the teacher is to make a satisfactory adjustment to the ADN program may be described as follows:

1. *Philosophy of the ADN program:* There are two views of the professional status of nursing: (1) all registered nurses should share professional status, or (2) only nurses with a baccalaureate or higher degree should enjoy professional status. By intent the ADN program prepares registered nurses who will receive semiprofessional status. Instructors in the ADN program must be committed to this philosophy, and hence hold the second view. If ADN faculties hold the first view, ADN program goals are not met since little distinction is made between the different types of nursing programs.

   The instructor must understand clearly the implications of the label *semiprofessional* (or *technical*) if she is to help the community and her associates understand the ADN program. This educational program develops the student's skill and judgment so that she may contribute to society both as a nurse and as a well-rounded individual. The student must be helped to appreciate the importance of this role and to recognize its difference from that of the professional nurse.

2. *Level of preparation:* The ADN program prepares a highly skilled nurse who will perform general nursing care under qualified supervision. It is assumed that she will perform well if properly oriented and utilized. Unfortunately, many institutions have forced the ADN graduate to accept positions for which she has received little or no formal preparation. In many instances she has not received even a suitable on-the-job orientation.[4]

   Many ADN faculties weaken their program by incorporating some curricular content normally not intended for this level of practitioner.[5] ADN faculties must decide what content is appropriate and proceed to teach within the prescribed limits. Competition for the ADN graduate should exist on a horizontal plane with graduates

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from other ADN programs but not on a vertical plane with graduates from different programs.

Content presented in the ADN program differs from that presented in the baccalaureate program; consequently, an important step requiring immediate action is the preparation of ADN state board examinations which are separate from the baccalaureate examinations.

3. *Counseling function:* Due to the "open-door" policy within the community college, student capabilities vary considerably. Whatever the reason for attending college, each student is seeking a way to realize his potential. With the extreme diversity of student interests and background, there are too many student problems for the capacity of the college's counseling service. Therefore, a faculty member must expect to be exposed to student problems and devote some time to counseling.

Inherent in the counseling function are two obligations. First, in view of the diverse student ability, there must be no hesitation in helping students choose goals in line with their abilities. Second, the intellectually gifted student must be exposed to the baccalaureate program. This does not mean that ADN programs be depleted of all intellectually gifted students. It means that the philosophy and limitations of the ADN program should be presented to the students to allow them to make sound decisions.

With adequate counseling and student selection there will be an accompanying increase in the effectiveness of the teaching-learning process, therefore, a higher likelihood of ADN program success.[6]

4. *Teaching function:* A new era of nursing education has begun. New teaching techniques, different approaches to subject matter, and carefully planned educational experiences all help to build a modern approach to nursing which has definite curricular implications. The trend is for semiprofessional nursing education to move out of the hospital and into the community college. This trend meets present student demands for a more diversified educational experience.

While nursing education remained in the hospital setting, the nurse-educator gained recognition due to excellent nursing capabilities. Although necessary, these capabilities must be coupled with the skills of a competent teacher to enable the nurse-educator to move into college teaching.

For many nursing instructors, the transfer to a college will be a new experience. They must view the nursing program within the collegiate framework and promote interdisciplinary communication.

As nursing instructors spend much time away from the college, they tend to become isolated from college activity. Faculties must work together in order to maintain quality within diversity which is essential to community college education.

5. *Responsibility to the community:* A college serves a particular community; therefore, a faculty member is expected to assume some responsibility for meeting the needs of the community. The curriculum should be developed in line with identified community needs but not at the expense of program philosophy. When conflicts arise, a faculty member should suggest solutions that maintain the worth of the educational program and assist the community in resolving the conflict.

An unresolved issue which faces ADN programs in many areas is whether administrative skills should be taught in the program to meet the needs of the service agencies. To resolve an issue such as this, each ADN faculty member requires a sound commitment to the program philosophy and a willingness to assist the service agencies in finding a mutually satisfying solution.

These problem areas are presented to help potential faculty members resolve current issues in their own minds before committing themselves to teach in ADN programs. If nurse educators do not appear convinced of the philosophy of their programs, they hardly can expect students, nurses, or the community to be so.

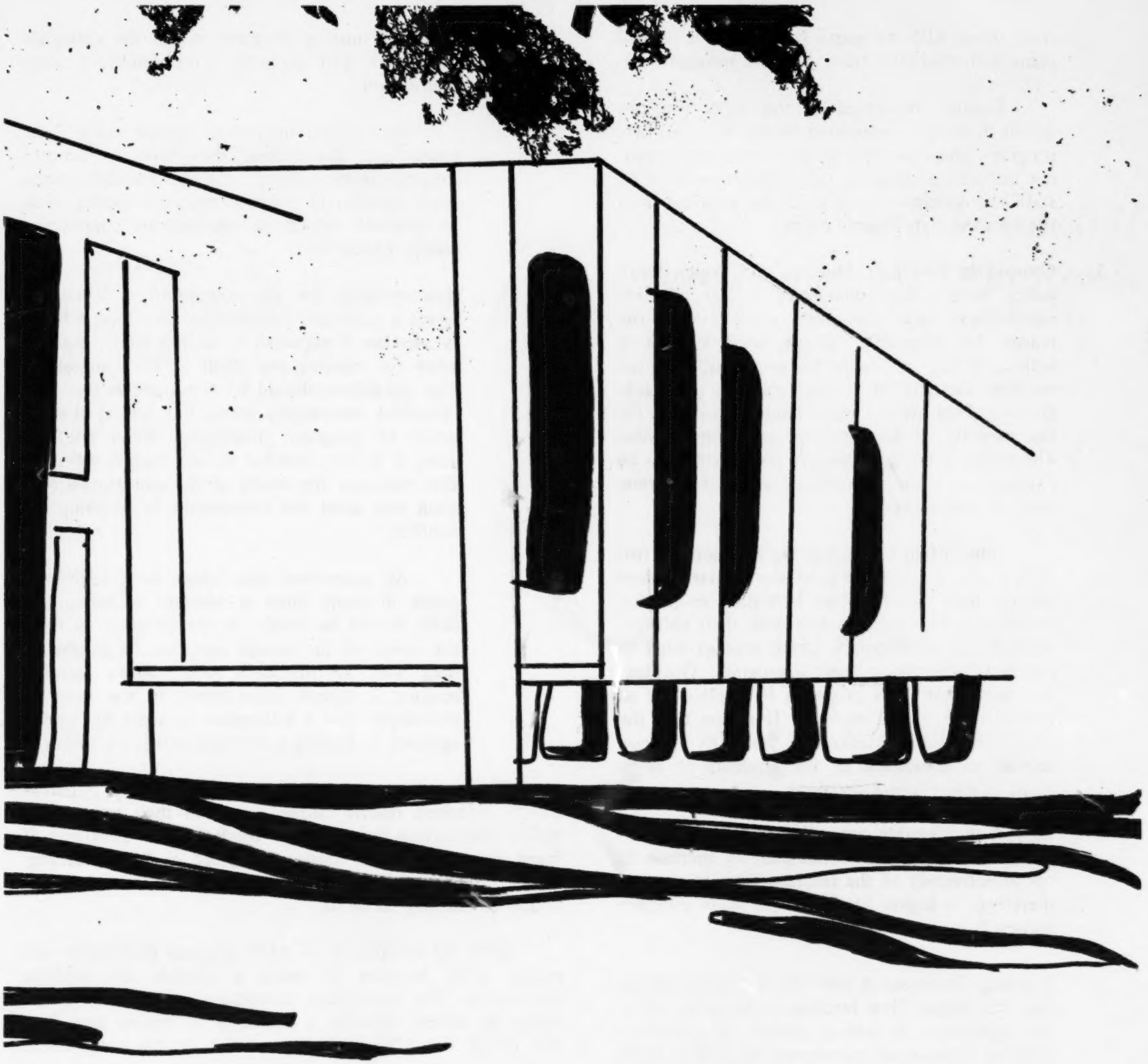
Only the acceptance of ADN program philosophy will enable ADN faculties to select a suitable and uniform curriculum. The concurrent acceptance of program philosophy by service agencies is necessary to ensure that they will utilize the ADN graduate according to her preparation.

Inherent in the teaching and counseling function is the nursing educator's obligation to prepare herself to fulfill these duties competently.

As the ADN program has been designed to meet community needs, promoters of the program must be sure this function is being accomplished. If a community need is not being met, educators should consider helping service agencies set up their own on-the-job programs. Alternatively, they should initiate the necessary program for registered nurses at the college level. Either approach would in no way jeopardize the educational philosophy of the ADN program.

FOOTNOTES

[1]Griffin, Gerald. Address given at the Department of



Daytona Beach Junior College, Daytona Beach, Florida

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[2]Anderson, Bernice E. *Nursing Education in Community Junior Colleges.* Philadelphia: J. B. Lippincott Company, 1966. p. 261.

[3]Geitgey, Doris A. "The Teacher in Associate Degree Nursing Programs." *Nursing Outlook.* 15:30-32; February 1967.

[4]Fiorentino, Mary C. "A Study to Determine How Well Graduates of Associate Degree Programs in Nursing in the State of Washington Have Met the Expectations of a Selected Group of Superordinants." Master's thesis. Seattle: The University of Washington, 1967. 95 pp. (Unpublished)

[5]Walters, Carol J. "A Survey of the Consistency of Faculty Expectations of the Graduates of an Associate Degree Nursing Program." Master's thesis. Seattle: The University of Washington, 1967. 68 pp. (Unpublished)

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What is Expected of The Associate Degree Nurse?*

Social and technological changes, especially after World War II, created an increasing demand for nurses with varying levels of preparation. To help meet this demand, the associate degree nursing program was established to prepare technically competent nurses. Since the late 1950's, nursing has seen a rapid growth of these programs with large numbers of technical nurses employed by many clinical agencies.

To date, in the investigators' experience, very few employing agencies have made any distinctions between the type of preparation a nurse receives and the way in which she is utilized.

It is essential to sound nursing practice that personnel of employing agencies, as well as members of the nursing profession, clearly understand the roles and functions of graduates from each type of educational program. Only if such understanding exists can nursing practitioners most effectively utilize their educational backgrounds.

Studies have been conducted to evaluate graduates from A.D.N. programs. The studies reported were found to be concerned mainly with determining whether the graduate was able to function in the clinical areas. Most of these studies utilized employer evaluations; however, the studies seldom specified whether employers' behavioral criteria were in conformity with the behavioral criteria associated with the A.D.N. program.

The investigators writing this report believed an initial approach to this problem would be to identify the expected nursing behaviors of the A.D.N. graduates. To accomplish this, studies were conducted with faculties of community college nursing programs, graduates of these programs, and employers of the graduates. The populations for all three studies were drawn exclusively from the State of Washington.

The descriptive survey method was utilized. The tool used to collect the data was a questionnaire identifying nursing behaviors. These behaviors were based on those identified by the Oakland City College faculty with the assistance of Doris A. Geitgety, director of the University of California Los Angeles Project in Continuing Education for Junior College Teachers of Nursing, supported by the W.K. Kellogg Foundation.

Nursing Outlook was consulted regarding the use of the Oakland study as a guide.[1] This guide was selected because it is one of the few publications available which identify the specific nursing behaviors expected of the associate degree graduate. The evaluation of the guide and the questionnaire derived from it were based on the philosophy for the nursing technician program as posed by Montag.[2]

Each of the sixty behaviors listed in the questionnaire was placed into one of five categories: (1) basic nursing skills, (2) communication skills, (3) enhancement of personal growth, (4) nursing judgments, and (5) administrative skills. For example, items indicating ability to work with equipment and/or give direct patient care were placed in the basic nursing skills category. The administrative skills category included such items as making assignments clear and team leading. This category of nursing behaviors was not expected of the A.D.N. graduate since it is inconsistent with the philosophy of the program. The respondents indicated at which time period these corresponding behaviors were expected, or as in the case of the employing agents, at which time period the graduate appeared to perform the behavior satisfactorily. An opportunity was provided for the respondent to indicate that the behavior was not expected at any time during the employment period. Anticipated responses were agreed upon by the three investigators prior to

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Mary Fiorentino, Sharon Stewart, Carol Walters, and Doris Geitgey. Reprinted from the April 1969 issue of the Junior College Journal, pp. 62-68.

mailing the questionnaire. Agreement was reached, too, as to which items represented behaviors expected by the investigators and at which time period each of these behaviors should be anticipated. The time periods were (1) on employment or within one month of employment, (2) within six months, or (3) not at all. Seventy per cent agreement among the respondents was accepted as indicative that the behavior should be expected or was present among A.D.N. graduates. The 70 per cent level was chosen as the level of agreement because it is sufficiently greater than by chance alone – 50 per cent. Questionnaires were sent to 26 instructors in four A.D.N. programs, 118 graduates, and 133 directors of nursing service. Usable responses were returned by twenty-four faculty, sixty-two graduates, and fifty-two directors of nursing services.

The data from faculty responses showed that more than 70 per cent of the faculty expected the associate degree graduate to be able to perform all behaviors in the areas of skills, personal growth, communications, and nursing judgment at the time of employment. These data were in agreement with the criteria selected for this study.

The data revealed less than 70 per cent agreement on all behaviors categorized as administrative behaviors. The responses ranged from those which expected these behaviors at the time of employment to those that did not expect the associate degree graduate to perform these behaviors at any time during the employment period. According to the philosophy of the associate degree nursing programs, these behaviors should not be expected of the graduate. Half of the respondents commented that these behaviors were not an objective of their program and that the associate degree graduate needed additional education before assuming these responsibilities. Interviews conducted with the faculty members and/or directors of the programs indicated that all programs offered some team leading experience for all or selected students. This experience varied from one day with a team leader to several weeks as a team leader.

The preparation of the faculty and their past experiences were examined to determine if these variables influenced the responses to the questionnaire. No consistent pattern appeared from the analysis of these variables; however, some interesting tendencies did appear when the variables were analyzed. The faculty members who had taught in baccalaureate programs prior to the associate degree programs tended to expect the administrative behaviors at a later date after employment than those faculty members who had taught only in the associate degree program or in the diploma program. Faculty members who had taught in the associate degree programs for less than a year did not expect the graduates to be able to perform the administrative behaviors at the time of employment as frequently as those faculty members who had taught for longer periods of time.

The knowledge which faculty members had about the associate degree programs prior to employment varied greatly from extensive orientation to no previous knowledge about the programs. Faculty members without previous knowledge of programs expected the graduate to be able to perform the administrative behaviors more frequently than those faculty members with previous knowledge of the programs. Age did not appear to influence the responses to the questions in the area of administration.

In the study determining the A.D. graduates' perceptions of employer expectations, the data indicated 70 per cent of greater agreement on fifty-two of the items. Of the fifty-two items, the observed responses of the graduates were in agreement with the expected responses of the investigator on all but two items. The two items for which the observed responses were different from the expected responses were in the administrative category. The respondents perceived the employer expecting these behaviors within one to six months after employment. The investigators did not expect these behaviors at any time of the employment period.

Of the eight items on which the graduates disagreed, six were in the administrative category. The responses varied from perceiving these behaviors being expected immediately upon employment to not being expected at any time during the employment period. Again, according to the philosophy of the A.D. nursing program, these behaviors are not expected at any time during the employment period.

The eight items with less than 70 per cent agreement were further studied. The age variable showed the most definite pattern of response. Younger graduates perceived the administrative behaviors being expected earlier in the employment period than did the older graduate. The older graduate perceived the employer expecting administrative behaviors either within six months of employment or not at all.

On analysis, the respondent's position, title, and years in the present position also affected the responses. The A.D. nurses in supervisory positions perceived employers expecting supervisory behaviors within a shorter period of time than did the staff nurses. The graduates employed less than one year also perceived employers expecting these behaviors earlier in the employment period than did those employed over one year.

No apparent pattern was noted in studying the size and control of the institution in which graduates were employed. The type of institution was not studied because of the limited size of the sample within the subcategories.

Generally, the graduates felt prepared by their programs for all sixty of the items. They felt the greatest lack of preparation was in the area of administration. On one item, "to assume the role of charge nurse for any of the three shifts," 60 per cent felt unprepared by their programs. In the other items in the administrative category, the number of graduates who felt unprepared by their programs ranged from 17 to 37 per cent. From the responses it can be concluded that the graduates do feel their programs are preparing them for team leading and administrative positions.

The data received from employers' responses indicated that of the thirty-eight items in which the graduate would be

expected to be proficient at the time of employment, there was no instance of 100 per cent agreement for any single item. A clear majority was reached for eleven of the items. Ten of these eleven items were behaviors involving nursing skill in the performance of procedures. One item reflected interest in personal growth. Ten items received less than 40 per cent agreement. These items, many of which are identified as the upper level of the cognitive domain, included behaviors reflecting the ability of the graduate in the area of nursing judgment. After a one-month period experience, twenty-two of the same thirty-eight items received a 70 per cent majority of agreement or over. Twelve items involved procedural skills, five were in relation to communication skills, and five reflected personal growth.

Of the fourteen items in which the graduate would be expected to be proficient after a one-month period of orientation and on-the-job learning, there was no instance of 70 per cent agreement for any one item; however, many employers indicated proficiency in these skills at the time of employment. After combining the two responses, nine of these fourteen items received a 40 per cent majority of agreement at the end of a one-month period of experience. Eight of these behaviors involved skill in performance of procedure, and one item related to communication skills.

Eight of the items were considered to involve administrative skills for which the graduate would have received little or no formal preparation. It was hoped the employer would select the standard of performance indicating that the graduate would not be expected to perform these functions. Nineteen per cent indicated they would not expect the graduate to "assume the role of charge nurse during any of the three shifts." The other seven items which were concerned with her ability to assign, clarify, and supervise learning experiences received between 5 and 12 per cent of agreement. This few only did not expect the graduate to perform these skills. Eighty-one or more per cent expected the A.D.N. graduate to perform administrative skills for which she had received little or no formal preparation. At the end of a six-month period, 60 to 81 per cent of the employers indicated that the A.D. graduates were meeting their expectations in the performance of administrative skills.

The data received further related that by the end of a one-month period of experience, a mean number of 83 per cent of employers indicated proficiency in procedural skills, and a mean number of 74 per cent indicated proficiency in skills reflecting personal growth. Receiving less than 70 per cent agreement were the two categories of communication skills and nursing judgments with means of 59 per cent and 45 per cent, respectively.

These figures are in keeping with the philosophy of technical nursing. In addition to stressing skill in the use of equipment and instruments is incorporated a sound educational foundation stressing the responsibility of citizenship and professional growth which leads to occupational competence under the guidance of a professional practitioner.

In order to determine whether the expectations of the participating groups in these studies were in agreement with the identified nursing behaviors of the A.D.N. graduate, the responses to the five categories of behaviors were compared:

In the category consisting of twenty-four basic nursing skills, the agreement among the three studies was extremely high (80 to 100 per cent) with the exception of three items – those dealing with chest drainage, gastric feeding, and tracheal suctioning. The faculty and graduates were in close agreement on these items, indicating that the graudate could be expected to perform these behaviors upon employment. However, the employers did not feel the graduates were able to perform these behaviors. Due to the fact that 57 per cent of the graduates were employed in hospitals having a bed capacity of 125 or less, it may be reasoned that the opportunity to perform these skills would not be available, and therefore, the employers found this difficult to evaluate.

Agreement between faculty and students was reported for all six items in the area of personal growth. The employers reported agreement on four of the six items. The two items on which no agreement was shown were (1) the graduate's ability to draw inferences from material which she has read and apply them to nursing situations and (2) maintaining standards of behavior that reflect personal conviction of what constitutes safe, effective nursing care.

In the category of communication skills, there was agreement among the faculty and graduates on fourteen of the fifteen items, but the employers agreed with only six of these items. A general implication from the employers' responses indicated the graduates' lack of ability in communication skills. All three groups reported a need for additional preparation in the referral of patients to appropriate resources.

Agreement between faculty and students was reported for six of the seven items indicating the graduates' ability to make nursing judgments. The one item on which graduates and faculty disagreed was "making judgments and establishing priorities in giving nursing care to a group of patients." The graduates perceived that the behavior was expected of them, whereas the faculty reported that this behavior was not expected of the A.D.N. graduates. The employers, however, indicated that their expectations were not met for any of the seven behaviors represented in this category. This indicates that the faculty expect and the graduates see the employers as expecting the A.D.N. graduate to be able to make nursing judgments. The graduates felt that their programs have prepared them for these behaviors; however, the employers do not believe that the majority of A.D.N. graduates perform them effectively.

The category in which the greatest variations were apparent was the category of administrative skills. Faculty response indicated that administrative behaviors were not an objective of their programs although some introduced administrative functions on the basis of anticipated employer demands. The graduates frequently reported that they perceived the employers expecting these behaviors within one month of employment. The employers reported that although they expected these behaviors at the time of employ-

ment, their expectations were not met. Sixty-three to 83 per cent of the graduates reported that they felt prepared for these skills except for one item, "to assume the role of charge nurse for any of the three shifts." Forty per cent felt prepared for this specific behavior. At the end of six months, all three groups expected the A.D.N. graduate to perform administrative behaviors.

Since the geographical location was limited, conclusions must be considered with caution. Data did point out several implications for nursing service as well as for nursing education. The 100 per cent agreement between faculty and graduates on seventeen items and the 70 per cent or greater agreement on most of the behaviors in the areas of basic nursing skills, communications, nursing judgments, and personal growth indicate that nursing service could expect these behaviors from the A.D.N. graduate. However, the pattern of responses received from the employers showed agreement for only those behaviors reflecting basic nursing skills and personal growth, while disagreement was noted on items concerned with nursing judgments.

The results of these studies further indicate that the role of the A.D.N. graduate in the area of administration is not clear. Some faculty members expect the graduate to be able to fulfill team leading and supervision roles at the time of employment, whereas others do not. The graduates generally feel prepared to perform these skills although there is a wide variation in their ability to actually perform the skills as reported by the employers.

The studies show that the A.D.N. graduate functions best in those behaviors stressing procedural skills. They also show that she continues to exhibit professional growth but requires more guidance in communication skills and in the area of making nursing judgments.

It was interesting to note that those items which had 100 per cent agreement of the faculty were the items upon which the students felt prepared. This indicates that the students are learning the behaviors which the faculty feel are most important and appropriate for the technical nurse; most of these behaviors were concerned with nursing skills and communications.

These data further indicate that A.D.N. graduates are not able to perform all the behaviors for which they have been prepared; furthermore, they are frequently expected to perform behaviors for which they have not been prepared, either by their programs or by in-service education.

It may be concluded from these studies that considerable dialog must take place between nursing service and nursing education in order to achieve the most effective preparation and utilization of the A.D.N. graduate.

FOOTNOTES

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Growth Pains for Associate Degree Nurse Educators*

It is becoming more and more apparent that the community college movement has profound implications for nursing in general and for nursing education in particular.

Some of the problems which have arisen out of community college programs in nursing may be based on the differences between two educational concepts: the community college philosophy and nursing education philosophy.

The community college movement is young. Its impetus was felt during World War II. Because of the youth of the movement, community college educators are flexible and adventuresome, willing and eager to test new concepts, adaptable to change.

Nursing education has a long, tortuous history. *Tradition* and *traditional* are words commonly used by nurses. Of necessity, nurses are a rigid group. When the life of an individual lies in her hands, the nurse must conform to certain standards. However, it is believed that this rigidity goes beyond necessity. Many "traditions" in nursing need to be brought into the light of day and examined for reasons other than "it has always been done this way." It is essential that this be done if nursing education wishes to maintain its relationship with the community college.

Four problem areas are discussed here. It is felt that there are many other areas which bear investigation. However, these are mentioned most frequently in the literature.

Perhaps of greatest concern to community college administrators is the cost of the associate degree program in nursing. Clinical teaching is the source of this problem since in this area nursing educators employ a low instructor-student ratio. It has been reported that the average nursing instructor-student ratio is 1:10 as compared to the 1:30 of other junior college instructors.[1] Exploration of the literature fails to indicate reasons for this approach to clinical teaching.

Most proposed solutions to this problem indicate a denial of the nurse educator's responsibility. In reviewing the literature, one detects an attitude of "we realize our program is more costly, but if you really want us you'll pay the difference."

During a group discussion at a National League for Nursing conference on nursing education in community colleges held on November 1, 1962, the subject of the cost of such a program was initiated. Potential solutions reported were the possibilities of " 'turning other students away' and 'shortchanging other students' in instances where operation within a fixed budget would require curtailment of other programs if a nursing program were to be inaugurated."[2]

It is doubtful that such grandiosity will promote good working relationships between the two groups of educators. A humility needs to be developed which places the responsibility for solutions where it belongs: with nurse educators.

New, more effective methods of clinical teaching which would result in more realistic student-faculty ratios must be investigated. Employing television for demonstration and for monitoring students' clinical performance would increase the ratio considerably. Initial cost would be high, but if less faculty resulted, it could in time pay for itself.

Group assignments in clinical teaching in which several students are responsible for various aspects of a patient's care, with further refinement and application for study, may be one solution. By using this technique an instructor could

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Margaret Koskuba. Reprinted from the May 1967 issue of the Junior College Journal, pp. 34-36.

teach a large number of students without assuming the responsibility for the care of a large number of patients.

Accreditation of associate degree programs in nursing was not an apparent problem until 1964. Programs receiving funds under the Nurse Training Act of 1964 must be accredited by the National League of Nursing according to a ruling by the Department of Health, Education, and Welfare. Community colleges have disapproved of specialized accreditation for justifiable reasons. Although nursing schools have been traditionally accredited by the National League for Nursing, directors of A.D.N. programs hesitated to follow this path. As directors of a new kind of program, most of them sought new methods of accreditation which would be more acceptable to their administrators. Changes were made in regional accrediting procedures to include review of the nursing programs, and they were accredited along with the college by the regional agencies.[3] The long-standing AAJC-NLN joint committee on nursing education has been reactivated to explore mutual problems, including accreditation.

Now, leaders in associate degree nursing education must decide who can best meet their accreditation needs and at the same time, provide assurance of educational quality in their programs. They need also to find a channel for making themselves heard on this issue.[4] The National League for Nursing may provide the opportunity for the latter. Last year the league established a department for associate degree nursing programs. Prior to this time the program had been placed in the same department with diploma schools, the hospital-based three-year programs. This new development will undoubtedly give associate degree nursing educators a voice at the national level.

Whatever method of accreditation is employed, it will have to be carefully weighed before it is put to use. Georgeen DeChow has stated: "We have won a battle by moving part of our basic education in nursing into the junior college, into an educational setting. Let us be sure that we do not lose the war by failing to guide our destiny in these programs toward the highest quality education it is possible for us to achieve."[5]

Nursing education is already facing a shortage of well-qualified instructors. Now, with associate degree programs mushrooming, a greater demand is placed upon the meager pool of prepared educators. The danger is obvious. There has been a decline in the academic preparation of faculty since 1961.[6]

The implications for nursing education, then, become apparent. An interest in graduate-level education needs to be created, top-level baccalaureate students in nursing must be encouraged to further their education, and interest in associate degree nursing education must be stimulated.

The latter can be accomplished by establishing graduate programs which will prepare educators specifically for teaching in this type of program. A few universities have initiated this kind of program, but there is a need for many more.

There is a long-standing dichotomy between nursing education and nursing service. Nurse educators have strong convictions about how nurses should function as graduates, and they educate them accordingly.

Nursing service has equally strong beliefs about the function of the graduate nurse arising from the many demands of attempting to fill the needs for nursing care. There is a tendency on the part of nursing service to use nurses on a higher level of nursing care than that for which they were prepared.

The misuse of the product of the associate degree nursing program is simply an extension of this overall problem. The diploma or hospital school prepares its graduate to give bedside nursing care. She is used in a supervisory role. The practical nurse student is taught to give the simple bedside care which the registered nurse can no longer give. She has gradually been given more and more complex care.

In 1951, Mildred Montag recommended the development of a two-year program in an educational institution. The graduate of this program would be called a *nursing technician* and would perform "intermediate functions" between the practical nurse and the professional nurse.[7] Following her recommendation, Miss Montag headed a five-year project in which she established seven associate degree programs throughout the country. An essential part of this project was the evaluation of the graduates of these programs. One criticism made by the directors of nursing service was the inability of the graduate to assume a supervisory role.[8] Again, this indicates a misunderstanding of what the graduate was prepared to do.

The solution is not simple. The dichotomy will continue to exist until leaders in the fields of nursing service and of nursing education can come together with an open-mindedness and without the defensiveness which both groups feel about their ideas. Perhaps through sharing sessions there can come a compromise solution which will be agreeable to both groups and will best meet the nursing needs of society.

FOOTNOTES

[1]Thomas, L. and Johnson, M.M. "Research in the Associate Degree Program in Nursing." *The Journal of Nursing Education* 3:32; August 1964.

[2]National League for Nursing. "Nursing Education in Community Colleges." Proceedings of the National League for Nursing Conference. The League, November 1962.

[3]DeChow, Georgeen H. "Accreditation of Associate Degree Nursing Programs." *The Journal of Nursing Education* 4:27-29; August 1965.

[4]*Ibid.*, p. 30.

[5]*Ibid.*, p. 32.

[6]*Ibid.*, p. 30.

[7]Montag, Mildred L. *The Education of Nursing Technicians.* New York: G.P. Putnam's Sons, 1951. p. 136.

[8]Montag, Mildred L. *Community College Education for Nursing.* New York: McGraw-Hill Book Co., 1959. p. 336.

[9]*Ibid.*, p. 360.